

1    CLAIMS

2    We claim:

- 3    1.   A method for locating position for a mobile commutation device, comprising: - - - - -
- 4    inputting geo-indicators (Gi-i, Gi-2, ..., Gi-n) based on text by a user with the mobile
- 5    commutation device;
- 6    transmitting the geo-indicators to a back end server;
- 7    generating a candidate feature set for each geo-indicator by applying geocoding which
- 8    maps the text address to a geo-location based on a back end spatial database;
- 9    deciding the final geo-location information by geocustering the candidate feature set; and
- 10   transmitting the geo-location information to the mobile communication device.
- 11   2.   A method for locating position for a mobile communication device according to
- 12   claim 1, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) are based on text inputted by
- 13   the user with the mobile commutation device, Gi-j is an item selected from a group of
- 14   items including: a street name, a building name, a postal code, a telephone number, and
- 15   any combination of these.
- 16   3.   A method for locating position for a mobile communication device according to
- 17   claim 1, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) are based on text inputted by
- 18   the users with the mobile commutation device, Gi-j is selected from a group including an

1 abbreviation of a street name and/or a building name, a local code of a postal code, a  
2 telephone number, and any combination of these.

3 4. A method for locating position for a mobile communication device according to  
4 claim 1, wherein said candidate feature set is a set of points determined from an item in a  
5 group of items including: a building name, a set of lines determined by a road name, a  
6 polygon determined by a postal code, a telephone number, and any combination of these.

7 5. A method for locating position for a mobile communication device according to  
8 claim 1, wherein said candidate feature set is labeled with a confidence level.

9 6. A method for locating position for a mobile communication device according to  
10 claim 5, wherein the geometry relationship and confidence level is taken into account  
11 when geocustering said candidate feature set.

12 7. A method for locating position for a mobile communication device according to  
13 claim 1, further comprising a step of feeding back a choice made by the user and/or  
14 adding an additional geo-indicator inputted by the user, in order to locate said position  
15 precisely.

16 8. A system for locating position for a mobile communication device, comprising:  
17 a mobile communication device, for inputting geo-indicators (Gi-1, Gi-2, ..., Gi-n) based  
18 on text;  
19 geo-location generating means, for generating a candidate feature set for each  
20 geo-indicator by applying geocoding which maps the text address to an geo-location  
21 based on a back end spatial database; and  
22 clustering means, for deciding the final geo-location information by geocustering the  
23 candidate feature set.

1 9. A system for locating position for a mobile communication device according to  
2 claim 8, wherein said mobile communication device is a WAP phone or a PDA.

3 10. A system for locating position for a mobile communication device according to  
4 claim 8, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) based on text inputted by the  
5 user with the mobile communication device, Gi-j is selected from the group of items  
6 including: a street name, a building name, a postal code, a telephone number, and any  
7 combination of these.

8 11. A system for locating position for a mobile communication device according to  
9 claim 10, wherein the geo-indicators (Gi-1, Gi-2, ..., Gi-n) based on text inputted by the  
10 user with the mobile communication device, Gi-j could be an abbreviation of a street name  
11 and a building name, or the local code of a postal code and a telephone number.

12 12. A system for locating position for a mobile communication device according to  
13 claim 8, wherein said candidate feature set could be a set of points determined by a  
14 building name, a set of lines determined by a road name, or a polygon determined by a  
15 postal code or a telephone number.

16 13. A system for locating position for a mobile communication device according to  
17 claim 8, wherein said candidate feature set is labeled with a confidence level.

18 14. A system for locating position for a mobile communication device according to  
19 claim 13, wherein the geometry relationship and confidence level is taken into account  
20 when geocustering said candidate feature set.

1 15. A system for locating position for a mobile communication device according to  
2 claim 8, further comprising result feedback means wherein a choice is made by the user  
3 or an additional geo-indicator is inputted by the user in order to locate the position  
4 precisely.

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5 16. An article of manufacture comprising a computer usable medium having computer  
6 readable program code means embodied therein for locating a position for a mobile  
7 commutation device, the computer readable program code means in said article of  
8 manufacture comprising computer readable program code means for causing a computer  
9 to effect the steps of claim 1.

10 17. A program storage device readable by machine, tangibly embodying a program of  
11 instructions executable by the machine to perform method steps for locating a position for  
12 a mobile commutation device, said method steps comprising the steps of claim 1.

13 18. A computer program product comprising a computer usable medium having  
14 computer readable program code means embodied therein for causing a system for  
15 locating position for a mobile commutation device, the computer readable program code  
16 means in said computer program product comprising computer readable program code  
17 means for causing a computer to effect the functions of claim 8.